Results: A total of 108 patients with COVID-19 were identified; 68.5% ($n=74$) were men, the mean age was 53 ± 14 years and the body mass index was 28.6 ± 5.8 kg/m^2. The most frequent comorbidity was hypertension with 24% ($n=26$). The presence of comorbidities was associated with risk of ICU admission (OR 3.9 [95% CI 1.6-9.9], $p=0.002$). The most frequent symptoms were cough (72.2%, $n=78$), fever (69.4%, $n=75$) and dyspnea (48.1%, $n=52$). At least one abnormal LFT was present in 94% ($n=103$) of patients at admission, the most frequent was LDH (88.9%, $n=96$), AST and GGT (63%, $n=65$), which are summarized in Table 1. Patients presented abnormal LFTs and respiratory symptoms in 48.1% ($n=52$), while 16.6% ($n=18$) presented abnormal LFTs without respiratory symptoms. Among GI symptoms, 37% ($n=4$) reported at least one, including diarrhea (28.7%, $n=31$), hyporexia (9.3%, $n=10$), nausea (8.3%, $n=9$) or vomiting (4.6%, $n=5$). Of patients admitted to the ICU ($n=39$), 27.5% ($n=10$) presented at least one GI symptom. Mortality was 7.4% ($n=8$). No associations were found between abnormal LFTs, GI symptoms, and outcomes of mortality and ICU admission.

Table 1
Initial liver function tests of patients with COVID-19 ($n=108$).

Parámetro	M [IQR]
Hemoglobin (g/dL)	14.6 [13.7-15.7]
Platelets (cells $\times 10^3$/L)	110.5 [100-136.6]
Albumin (g/dL)	3.2 [2.8 -3.5]
Total bilirrubin (mg/dL)	0.94 [0.67-1.01]
Direct bilirrubin (mg/dL)	0.23 [0.16-0.24]
Alanine aminotransferase (IU/L)	42 [28-52.7]
Aspartate aminotransferase (IU/L)	52.1 [33-55]
Alkaline phosphatase (IU/L)	72.5 [55-75.7]
Gamma-glutamyl transpeptidase (IU/L)	73 [34-77]
Lactate dehydrogenase (IU/L)	303 [222-360]

Conclusions: In patients with COVID 19, the presence of metabolic comorbidities confers a higher risk of ICU admission, in contrast to abnormal LFTs and GI symptoms that were not associated with clinical outcomes.

Conflicts of interest: The authors have no conflicts of interest to declare.

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Effect of chronic alcohol intake in a pre-clinical model with cholesterol overload

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Background and aim: Obesity and alcohol consumption are two of the main risk factors in liver diseases, which coexist frequently and are considered to accelerate the progression of liver damage, from simple steatosis to steatohepatitis, cirrhosis and cancer. The Mexican diet is high in cholesterol, in addition to being frequently found elevated in patients and animal models with obesity. Therefore, our goal is to determine the effect of alcohol intake in an environment with cholesterol overload.

Material and methods: Male and female mice of the C57BL / 6J strain 8-10 weeks old were used. The NIAAA model was used, which consists of consuming a Lieber-DeCarli diet added with ethanol (5% v / v final concentration) for 10 days, followed by acute dose intragastric (5 g / kg) of ethanol. Cholesterol overload was induced by adding cholesterol (1.25 w / v) to the liquid diet. Liver damage was assessed using liver function tests. Biochemical tests were carried out to determine the degree of apoptosis and the amount of cholesterol in the different experimental groups.

Results: The alcoholic diet added with cholesterol exacerbates liver damage and causes premature death of males. Also, the enzymatic activity of ALT and AST were increased, both in males and in females groups. Liver caspase 3 activity, indicative of apoptosis, was also found increased with respect to the other groups. At the macroscopic level, a liver with higher steatosis was observed in the group treated with alcohol and cholesterol, data that was corroborated by H&E in histological sections with a 5.15-fold increase in the total cholesterol content in the liver compared to the control group. Females had higher liver cholesterol content than males (18.66 μg cholesterol / mg protein vs. 15.6 μg cholesterol / mg protein), however, the activity of transaminases were similar in both genders.

Conclusions: The data obtained suggests that liver cholesterol overload increases susceptibility to alcohol damage. An increase in cell death was observed in this group, as well as in liver damage tests. Further studies are required to determine the mechanism by which greater damage is caused in the presence of both agents.

Conflicts of interest: The authors have no conflicts of interest to declare.

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Acute liver injury and survival in patients with SARS-Cov-2 from the Hospital Central Militar

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Background and aim: Recent studies on SARS-CoV-2 have shown that the incidence of liver injury varies between 14.8% and 53%, mainly demonstrable by abnormal ALT / AST levels accompanied by slightly elevated bilirubin levels. Reports of autopsies around the word of patients that death from COVID-19 shows severe liver damage ranging from 58.06% to 78% of the cases.

There is evidence that the elevation of transaminases (ALT / AST) translates into a more serious clinical profile. Besides, the elevation of AST is related with a high risk of mortality, so it must be monitored during hospitalization. Thus, it is important to know the behavior of liver injury and mortality in our population. Aim: To determine transaminase levels in patients with SARS-Cov-2 and its relationship with mortality.

Methods: All the patients admitted with a positive SARS-Cov-2 PCR test were analyzed, the mean and standard deviation of AST, ALT, and other variables of the liver biochemistry, hemoglobin, leukocyte, fibrinogen, and TP were obtained. A Kapplan Meier curve was made for survival to compare patients with and without transaminases elevation.

Results: We studied a total of 92 patients: 79 (86%) were male, age 56.62 ± 13.70 years, weight 72.5 ± 14.30 kg, height 1.63 ± 0.10